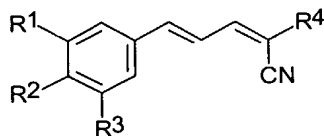


**Claims:**

1. A compound of Formula I, or a salt, solvate, or hydrate thereof:



I

wherein

- 5  $R^1$  and  $R^2$  are each independently selected from H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $C_{1-6}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),  $C_{1-6}$ alkyl(C=O)NH,  $C_{1-6}$ alkyl(C=O)N( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, O-Si( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo, or  $R^1$  and  $R^2$  together represent O- $C_{1-6}$ alkyl-O, thereby forming a ring;
- 10  $R^3$  is selected from H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $C_{1-6}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),  $C_{1-6}$ alkyl(C=O)NH,  $C_{1-6}$ alkyl(C=O)N( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, O-Si( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl), NO<sub>2</sub>, halo and CH<sub>2</sub>-S-(CH<sub>2</sub>)<sub>n</sub> Ar;
- $R^4$  is selected from C(X) $R^5$ , SO<sub>3</sub>Ar, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),
- 15 P(O)(OH)<sub>2</sub>, P(O)(OC $C_{1-6}$ alkyl)<sub>2</sub>, and C(NH<sub>2</sub>)=C(CN)<sub>2</sub>;
- X is selected from O, S, NH and N- $C_{1-6}$ alkyl;
- $R^5$  is selected from NH<sub>2</sub>, OH, NH(CH<sub>2</sub>)<sub>p</sub>Ar, NH(CH<sub>2</sub>)<sub>p</sub>OH, (CH<sub>2</sub>)<sub>p</sub>OC $C_{1-6}$ alkyl,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, NHHN<sub>2</sub>, NHC(O)NH<sub>2</sub>, NHC(O) $C_{1-6}$ alkoxy, N-morpholino and N-pyrrolidino; and
- 20 Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;
- n is 0 to 4; and
- 25 p is 1-4.

2. The compound according to claim 1, wherein  $R^1$  and  $R^2$  are each independently selected from H, OH,  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH-

C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkyl(C=O)NH, C<sub>1-4</sub>alkyl(C=O)N(C<sub>1-4</sub>alkyl), SH, S-C<sub>1-4</sub>alkyl, O-Si(C<sub>1-4</sub>alkyl)(C<sub>1-4</sub>alkyl)(C<sub>1-4</sub>alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo, or R<sup>1</sup> and R<sup>2</sup> together represent O-C<sub>1-6</sub>alkyl-O, thereby forming a ring.

3. The compound according to claim 2, wherein R<sup>1</sup> and R<sup>2</sup> are each  
 5 independently selected from the group consisting H, OH, OCH<sub>3</sub>, CH<sub>3</sub>CO<sub>2</sub>, O-Si(CH<sub>3</sub>)<sub>2</sub>(<sup>t</sup>Bu), S-Me, SH, CH<sub>3</sub>CONH, CH<sub>3</sub>CONCH<sub>3</sub>, and NO<sub>2</sub>.

4. The compound according to claim 3, wherein R<sup>1</sup> and R<sup>2</sup> are both OH  
 or R<sup>1</sup> and R<sup>2</sup> are both OCH<sub>3</sub>.

5. The compound according to claim 4, wherein R<sup>1</sup> is OCH<sub>3</sub> and R<sup>2</sup> is  
 10 OH.

6. The compound according to claim 1, wherein R<sup>3</sup> is selected from H,  
 OH, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylCO<sub>2</sub>, NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, N(C<sub>1-4</sub>alkyl)(C<sub>1-4</sub>alkyl), C<sub>1-4</sub>alkyl(C=O)NH, C<sub>1-4</sub>alkyl(C=O)N(C<sub>1-4</sub>alkyl), SH, S-C<sub>1-4</sub>alkyl, NO<sub>2</sub> and halo.

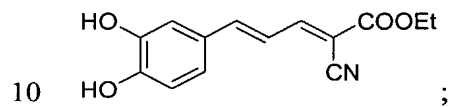
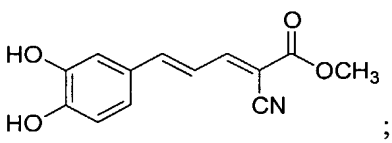
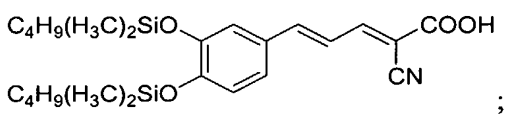
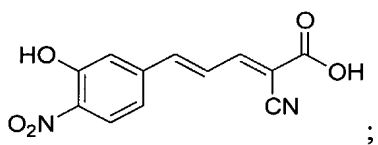
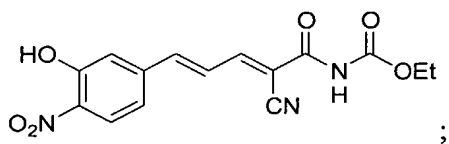
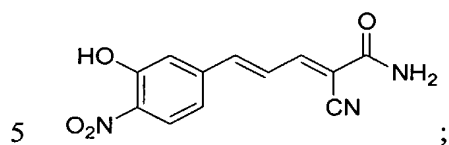
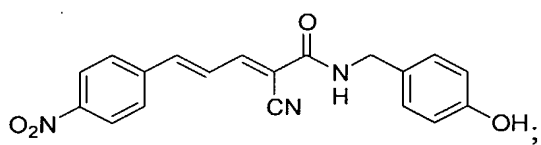
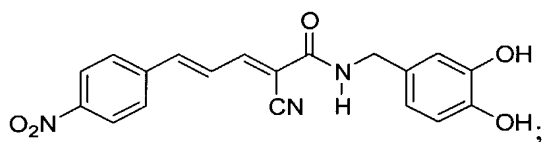
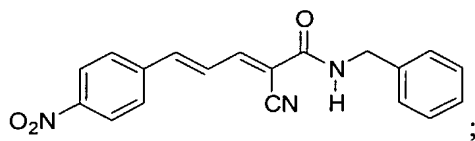
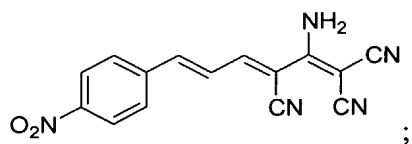
7. The compound according to claim 6, wherein R<sup>3</sup> is selected  
 15 fromselected from H, OH, OCH<sub>3</sub>, CH<sub>3</sub>CO<sub>2</sub>, SH, SMe, NO<sub>2</sub>, CH<sub>3</sub>CONH, CH<sub>3</sub>CONCH<sub>3</sub>, and halo.

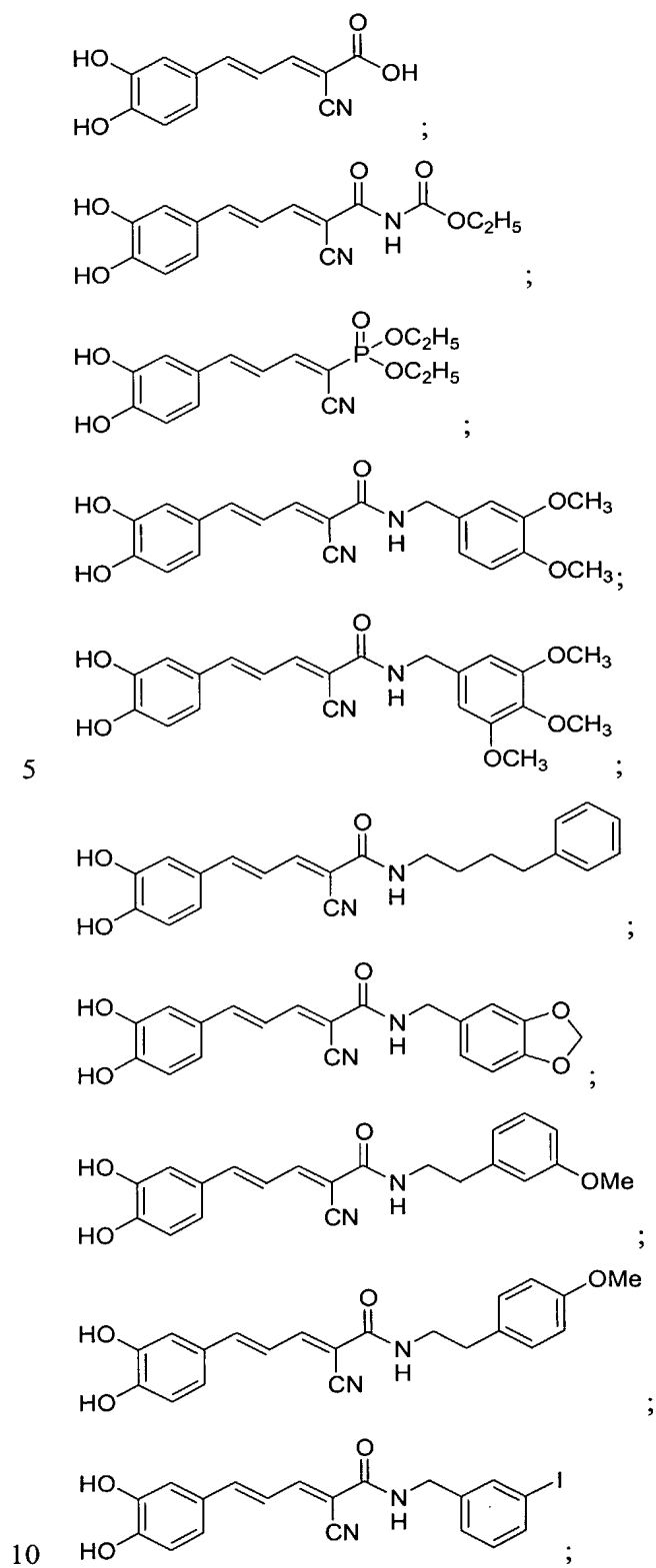
8. The compound according to claim 1, wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are each  
 independently selected from H, C<sub>1-4</sub>alkylCO<sub>2</sub>, C<sub>1-6</sub>alkyl(C=O)NH, and C<sub>1-6</sub>alkyl(C=O)N(C<sub>1-6</sub>alkyl), provided that at least one of R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is not  
 20 hydrogen.

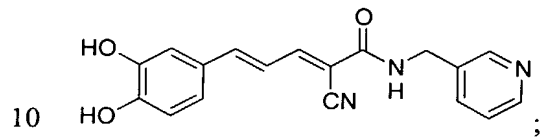
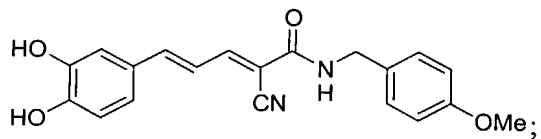
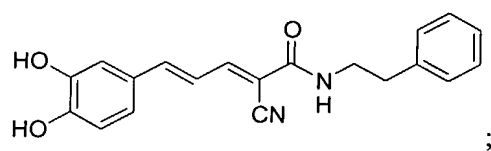
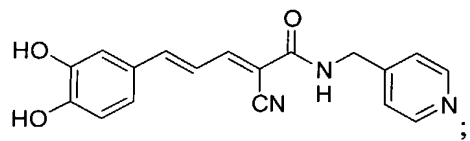
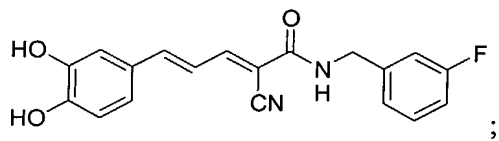
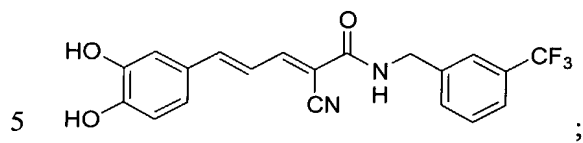
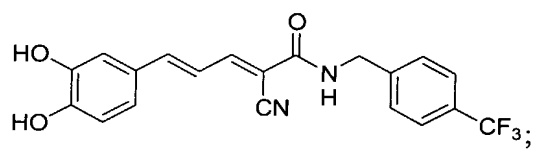
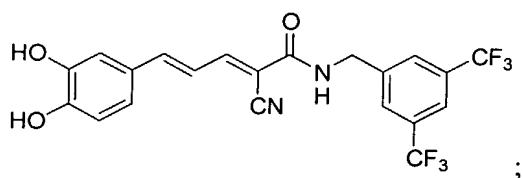
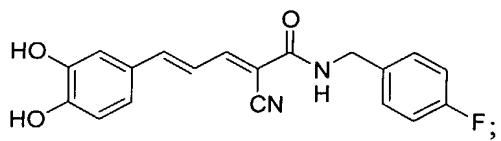
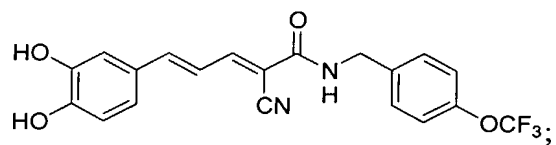
9. The compound according to claim 1, wherein R<sup>4</sup> is selected  
 fromselected from C(X)R<sup>5</sup> and C(NH<sub>2</sub>)=C(CN)<sub>2</sub>.

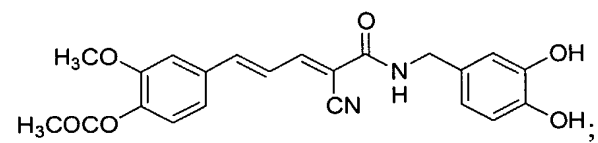
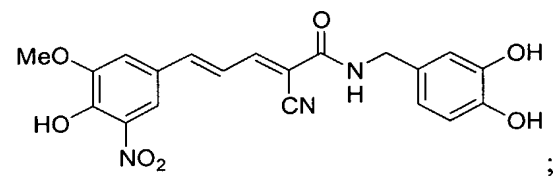
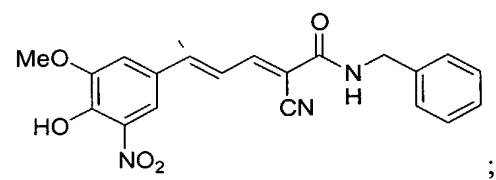
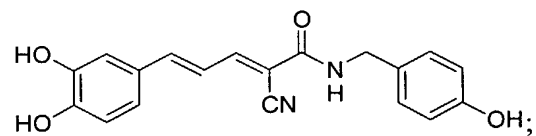
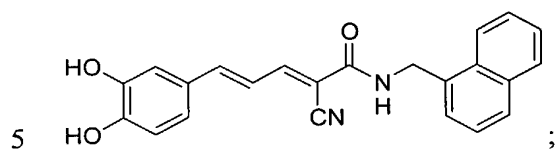
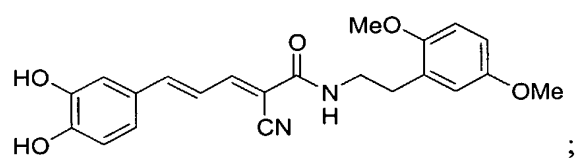
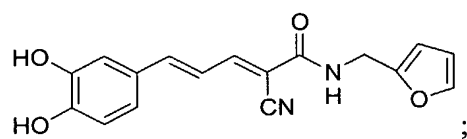
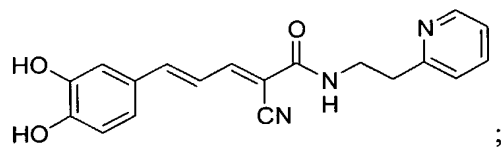
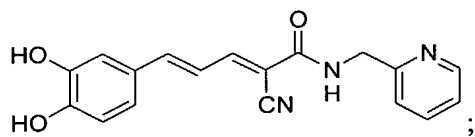
10. The compound according to claim 9, wherein R<sup>4</sup> is C(X)R<sup>5</sup>.

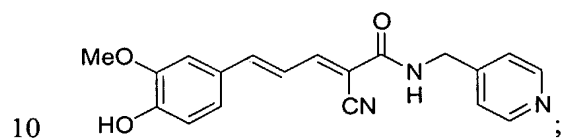
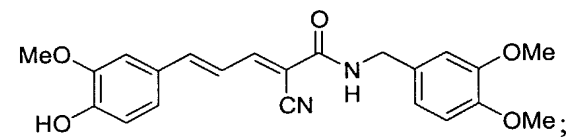
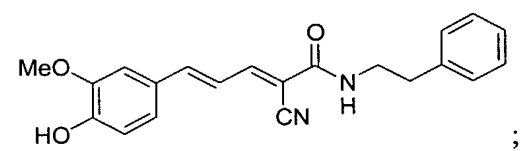
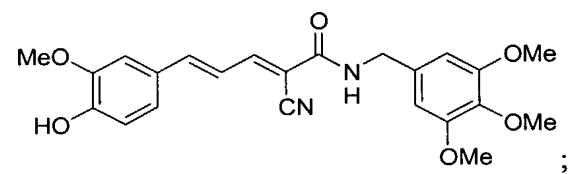
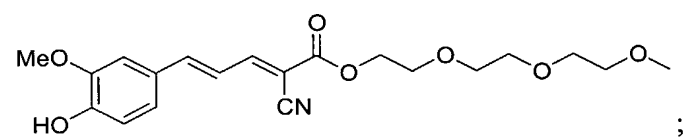
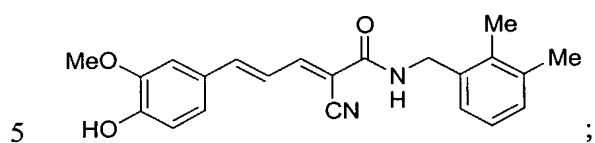
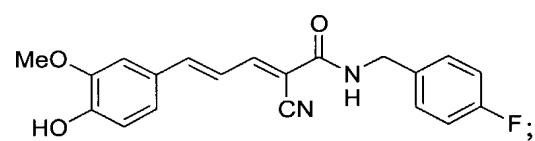
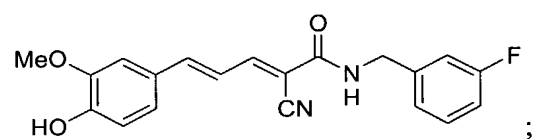
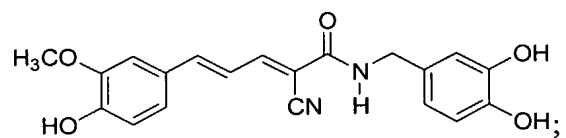
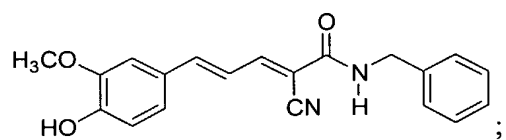
11. The compound according to claim 10, wherein X is selected from O and S.
12. The compound according to claim 10, wherein R<sup>5</sup> is selected from NH<sub>2</sub>, OH, NH(CH<sub>2</sub>)<sub>p</sub>Ar, NH(CH<sub>2</sub>)<sub>p</sub>OH and C<sub>1-4</sub>alkoxy.
- 5 13. The compound according to claim 12, wherein p is 1-3.
14. The compound according to claim 13, wherein R<sup>5</sup> is selected from NH<sub>2</sub>, OH, NH(CH<sub>2</sub>)<sub>p</sub>Ar, NH(CH<sub>2</sub>)<sub>p</sub>OH and OCH<sub>3</sub>.
15. The compound according to claim 14, wherein p is 1-2.
16. The compound according to claim 1, wherein Ar is an unsubstituted phenyl group or a phenyl group substituted with 1-4 substituents optionally selected from OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo.
17. The compound according to claim 14, wherein Ar is an unsubstituted phenyl group or a phenyl group substituted with 1-4 substituents optionally selected from OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo.
18. The compound according to any of claims 16 and 17, wherein Ar is an unsubstituted phenyl group or phenyl group substituted with 1-2 substituents optionally selected from OH, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-4</sub>alkyl, N(C<sub>1-4</sub>alkyl)(C<sub>1-4</sub>alkyl), SH, S-C<sub>1-4</sub>alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo.
19. The compound according to claim 18, wherein Ar is an unsubstituted phenyl group or phenyl group substituted with 1-2 substituents optionally selected from OH, OCH<sub>3</sub>, NH<sub>2</sub>, NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, SH, SCH<sub>3</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo.
20. A compound selected from:



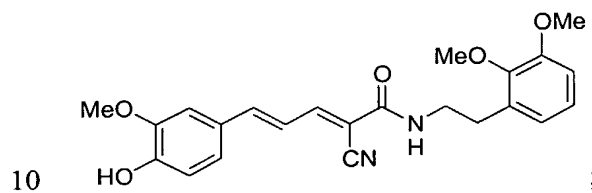
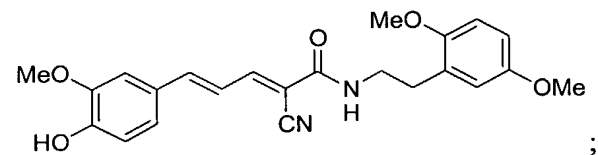
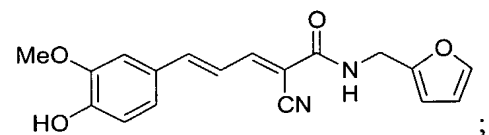
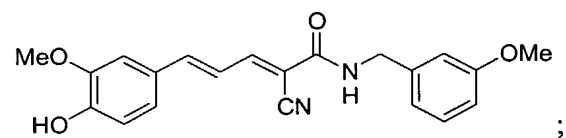
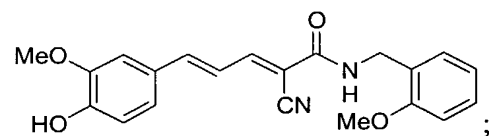
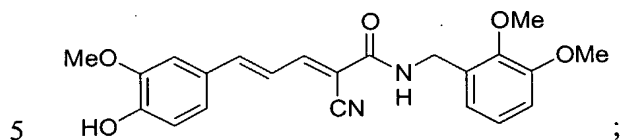
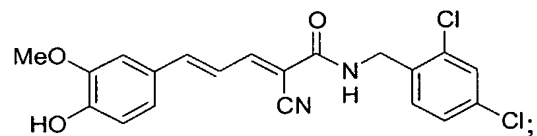
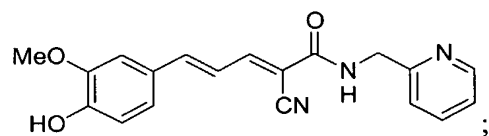
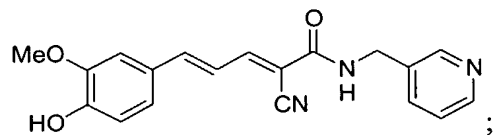
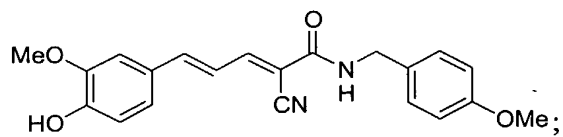


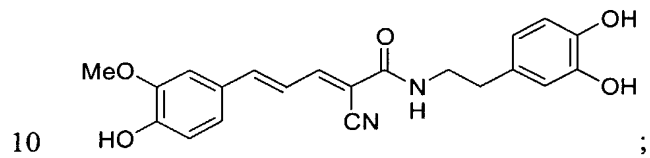
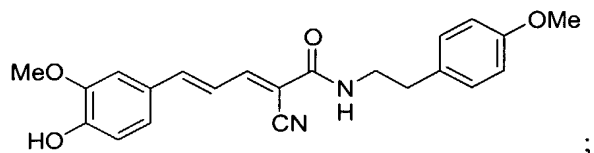
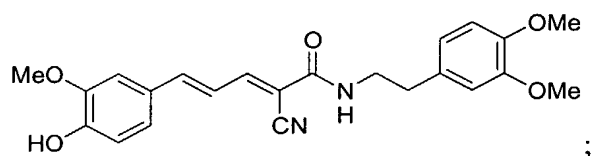
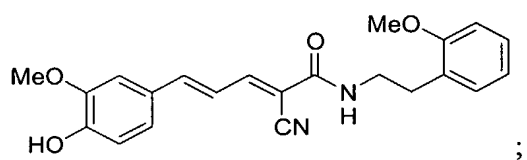
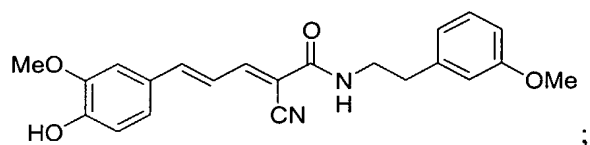
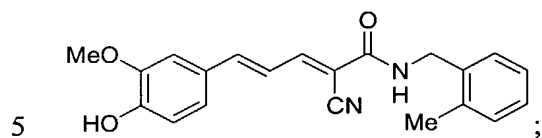
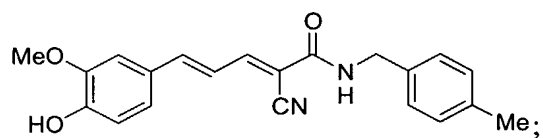
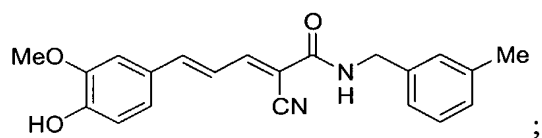
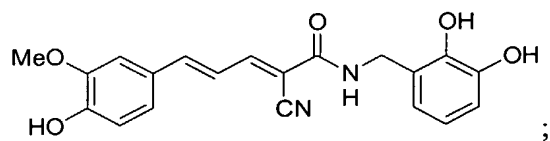
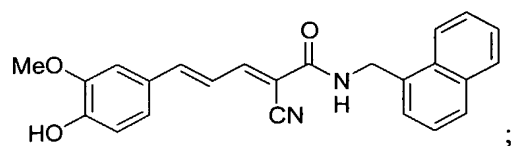


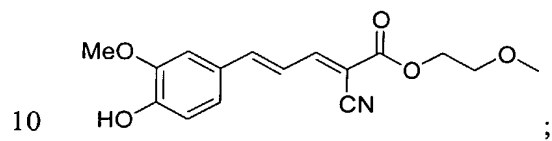
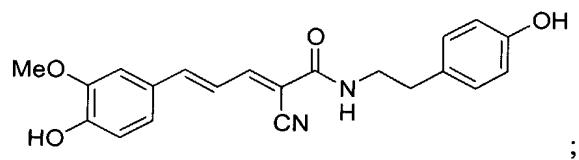
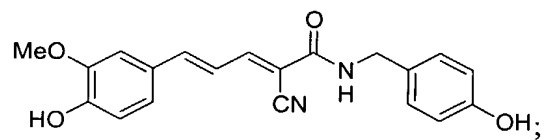
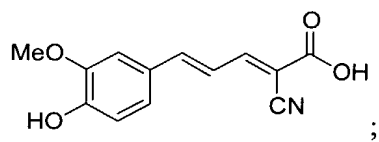
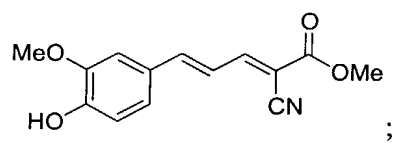
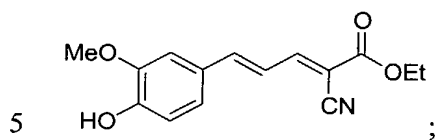
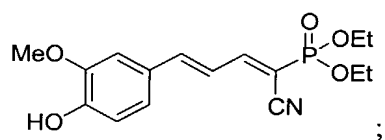
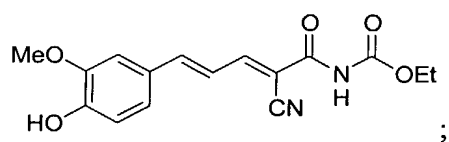
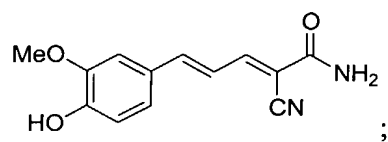
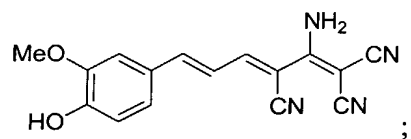


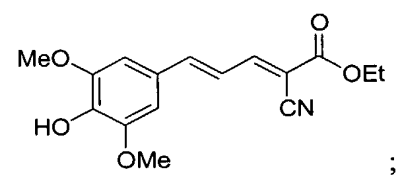
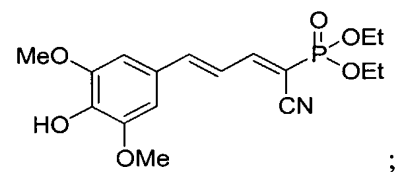
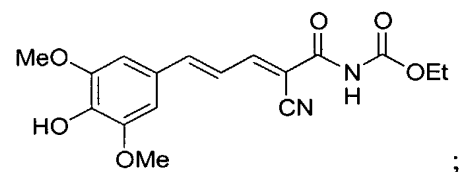
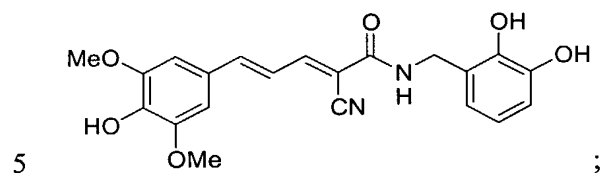
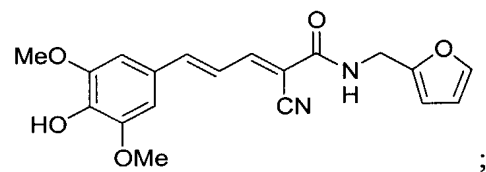
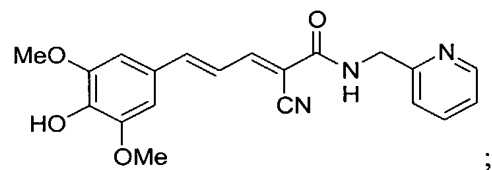
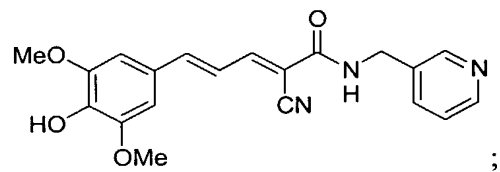
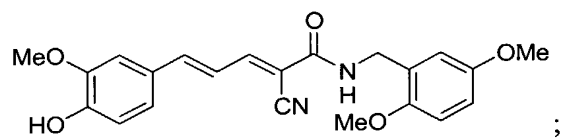


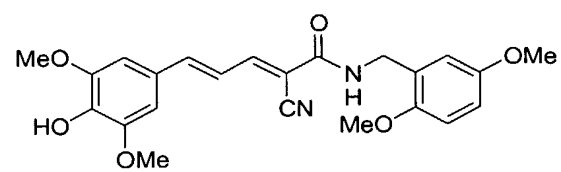
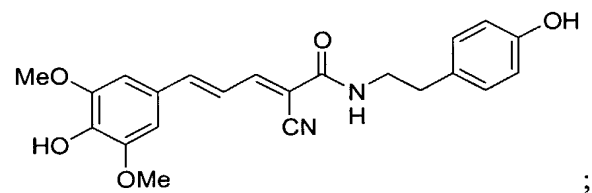
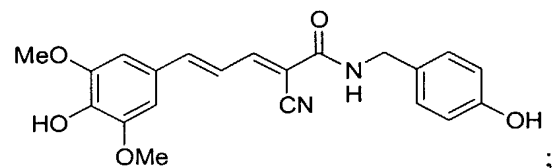
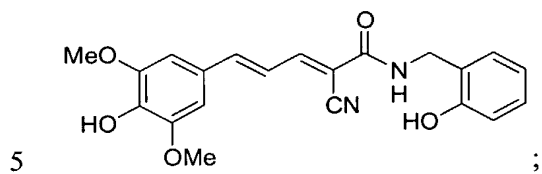
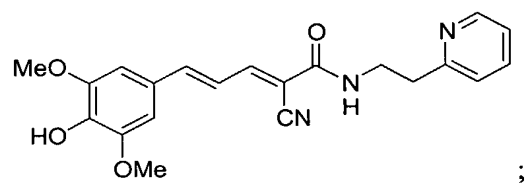
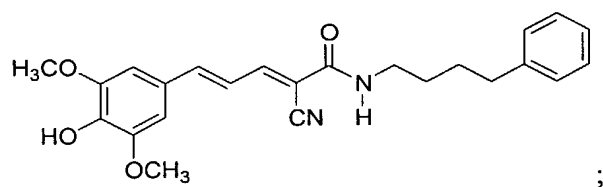
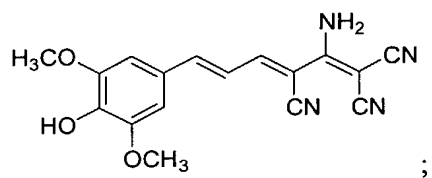
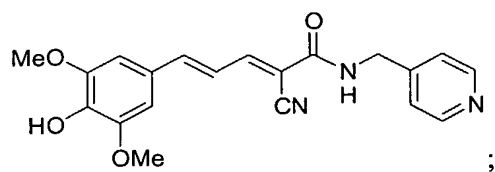


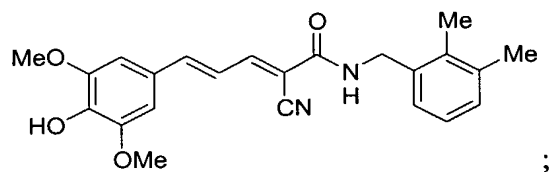




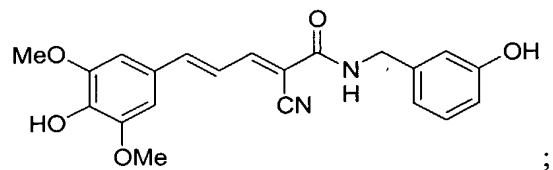




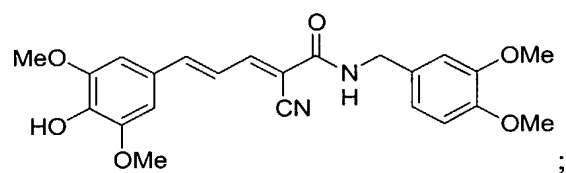
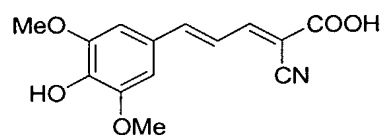




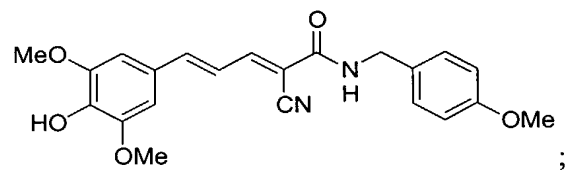
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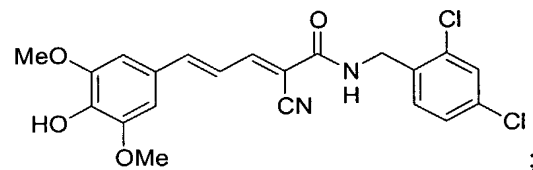


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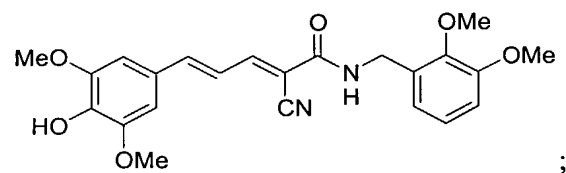


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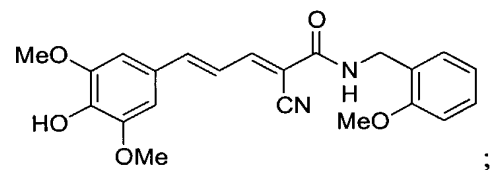
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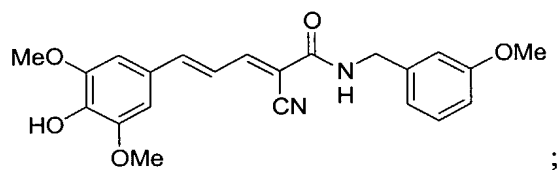
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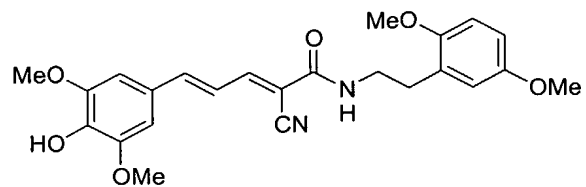
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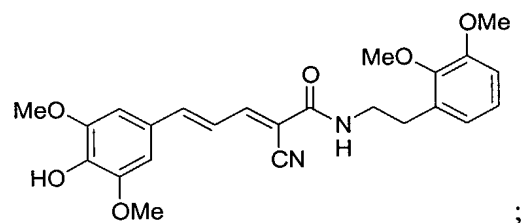
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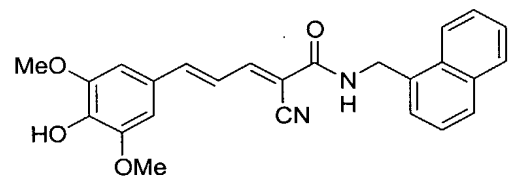
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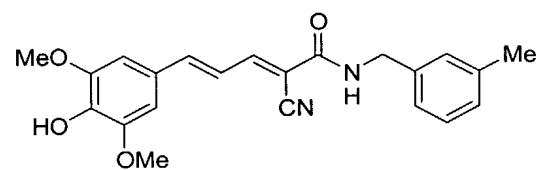
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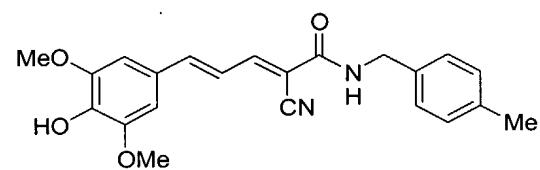


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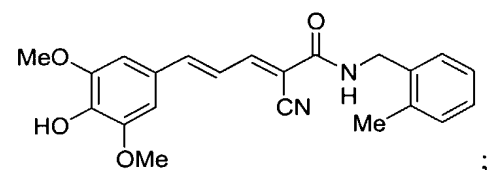


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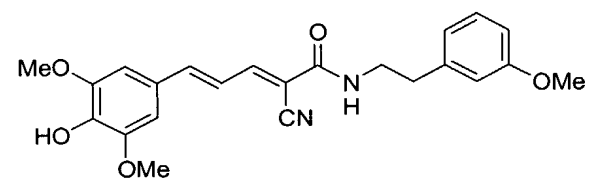
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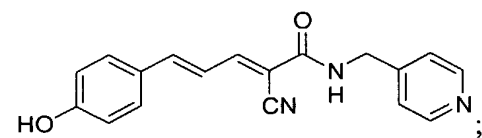
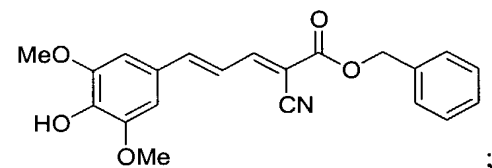
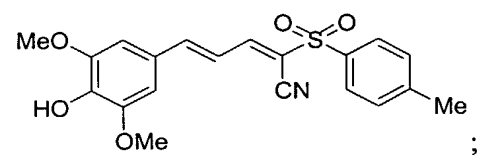
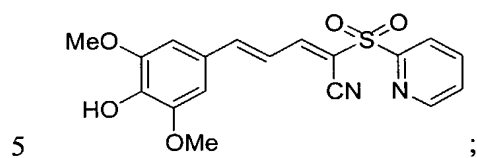
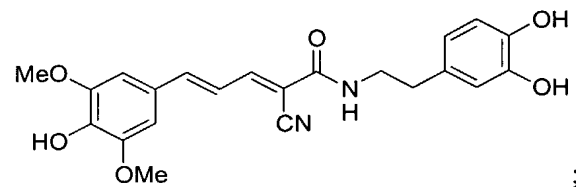
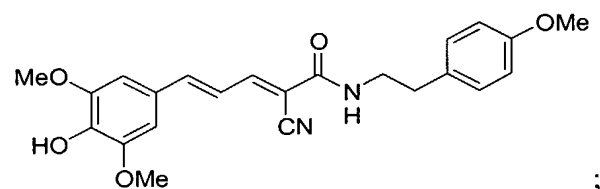
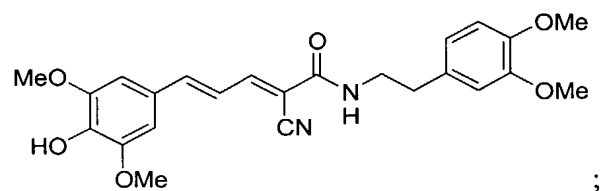
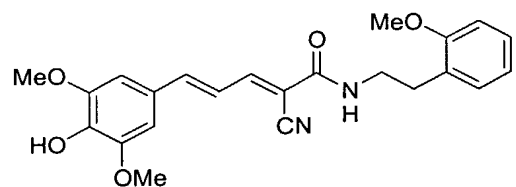
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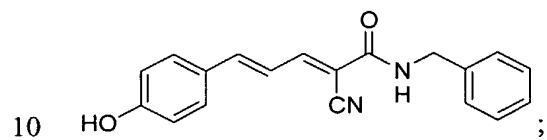
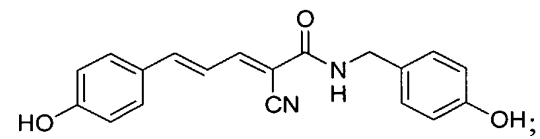
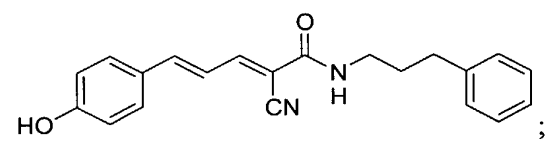
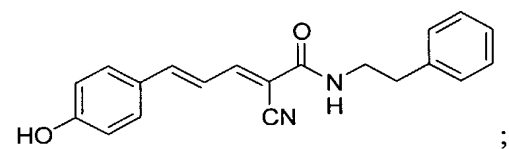
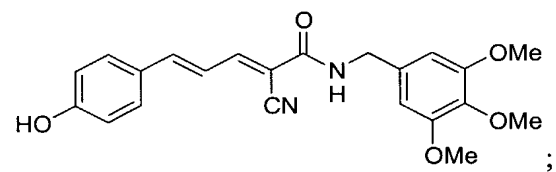
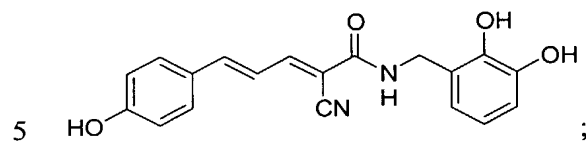
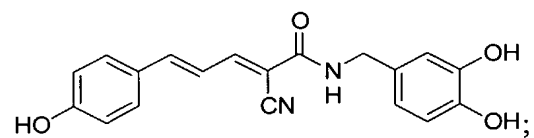
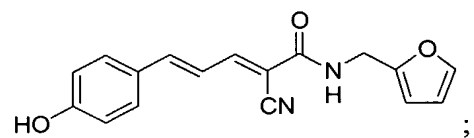
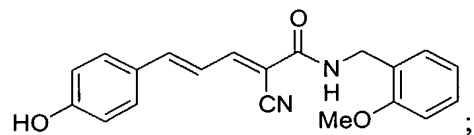
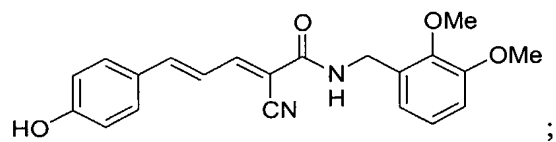
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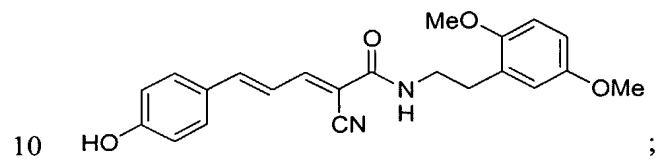
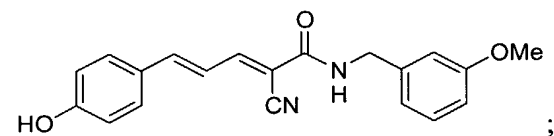
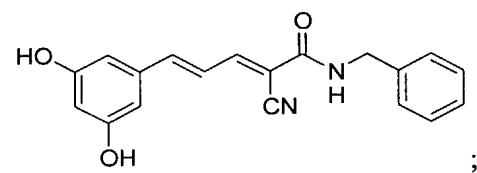
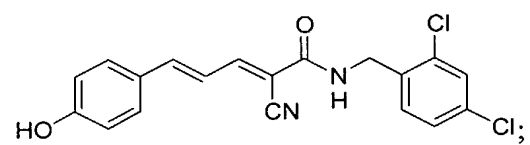
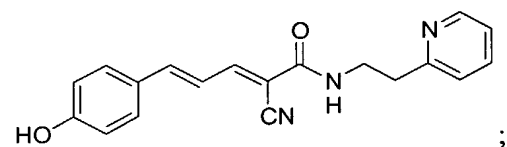
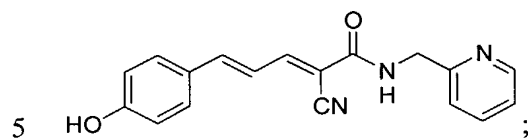
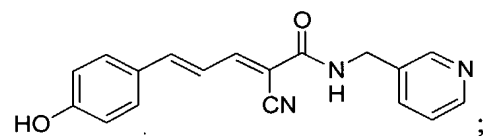
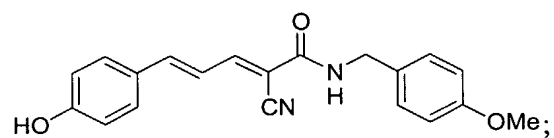
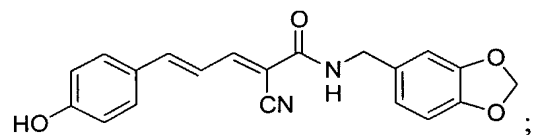
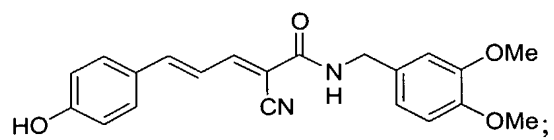


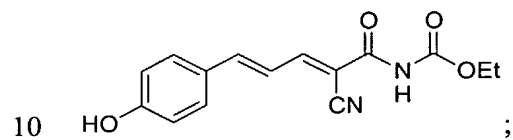
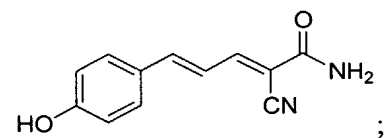
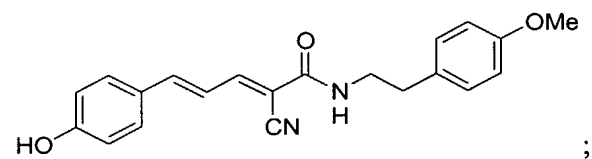
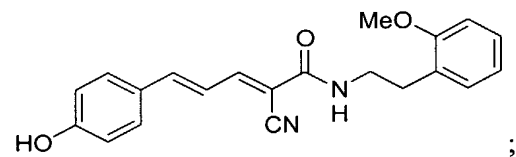
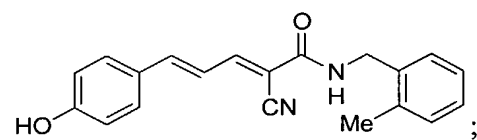
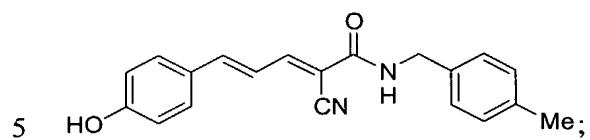
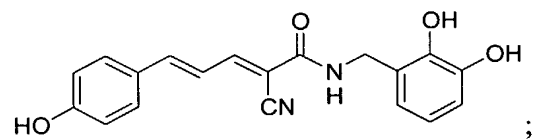
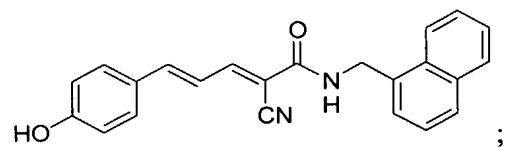
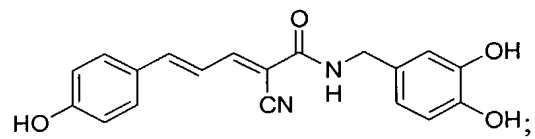
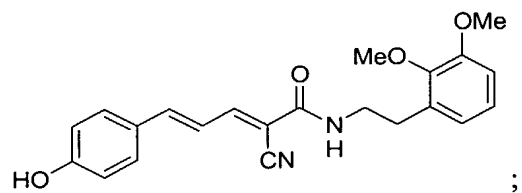
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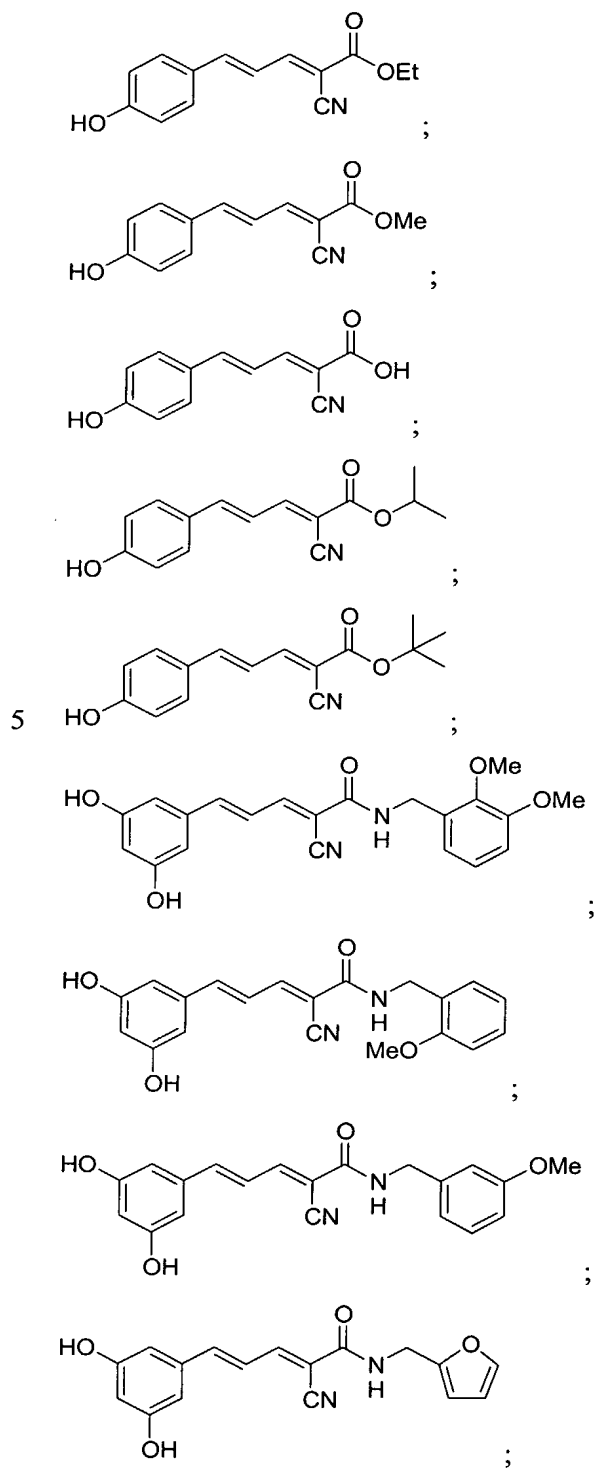


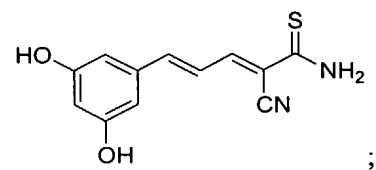
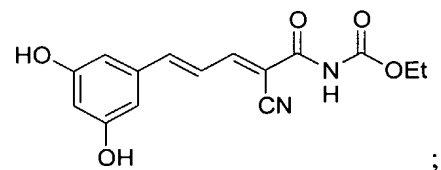
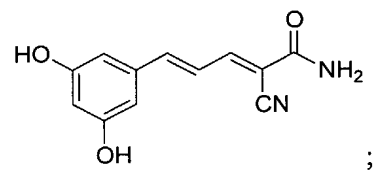
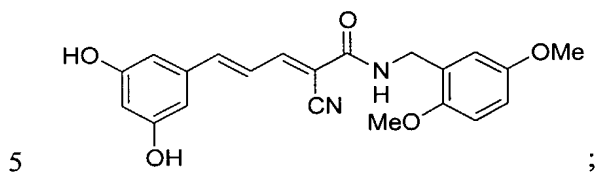
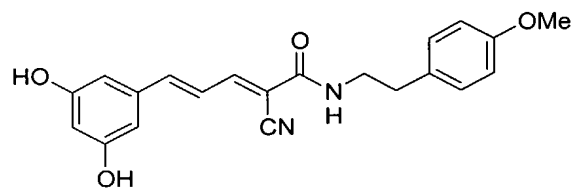
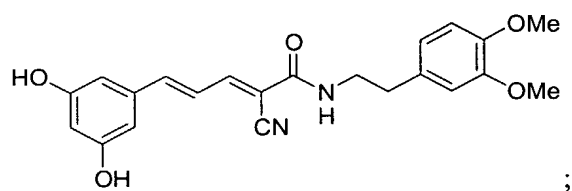
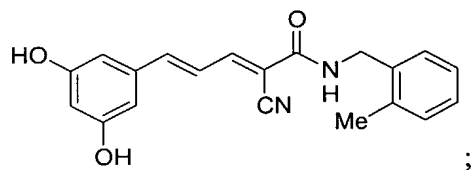
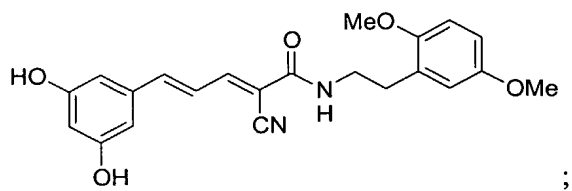


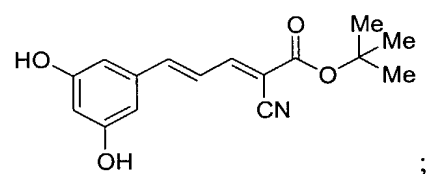
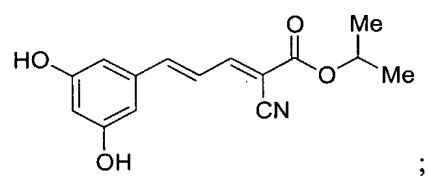
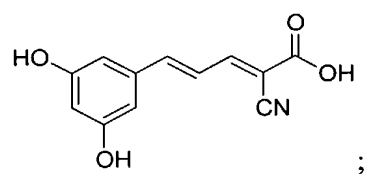
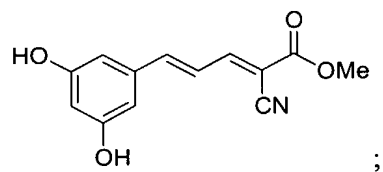
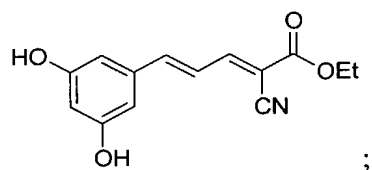




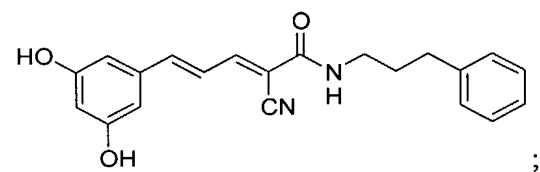
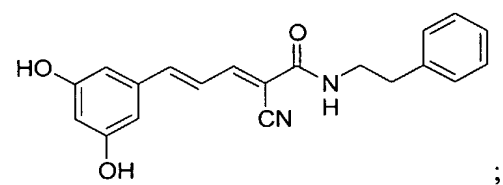
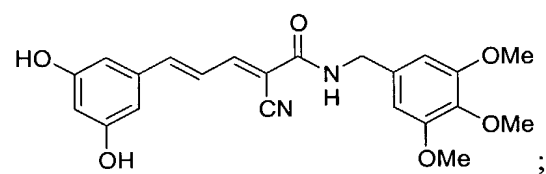


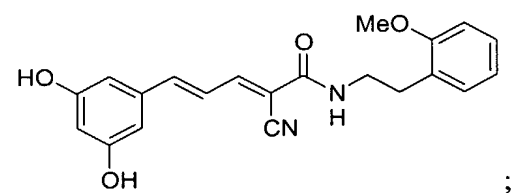
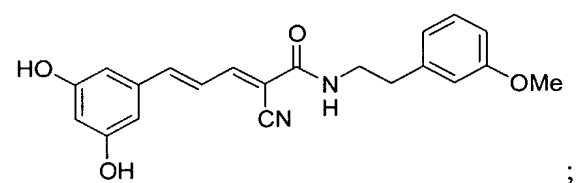
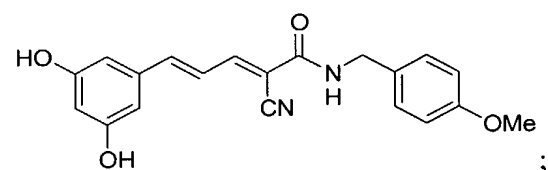
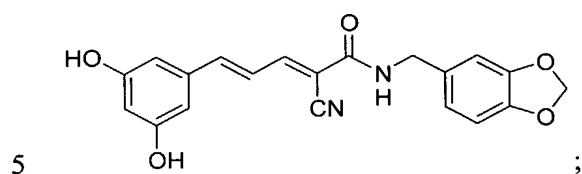
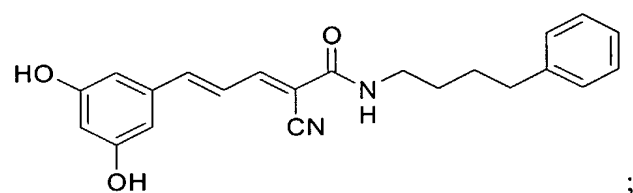
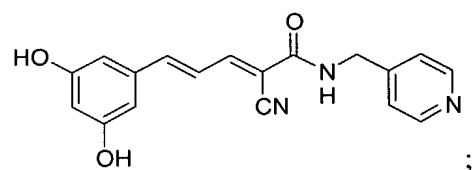
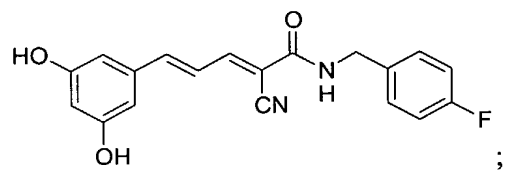
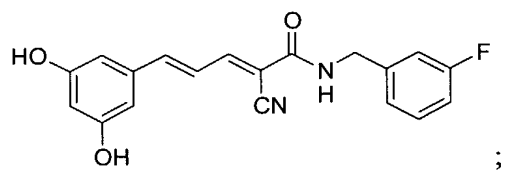


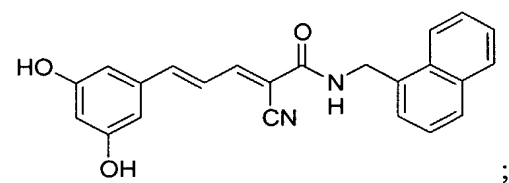
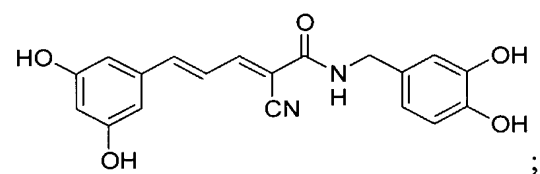
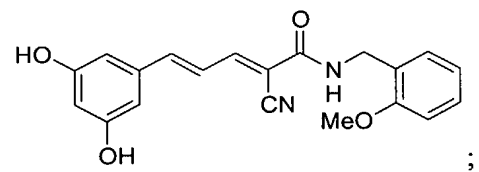
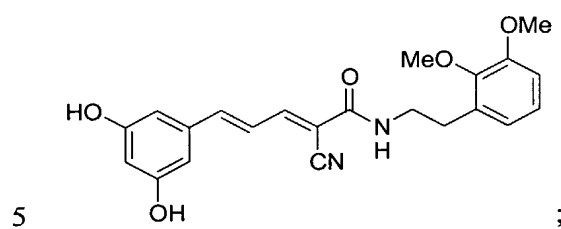
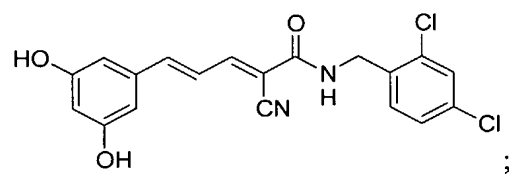
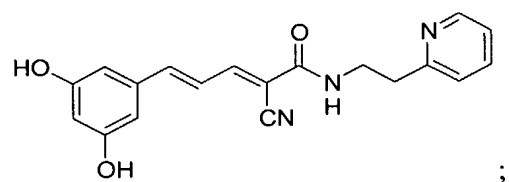
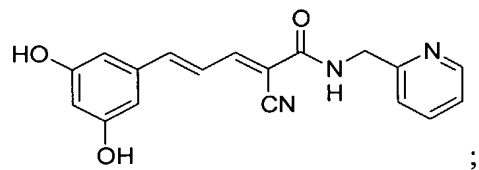
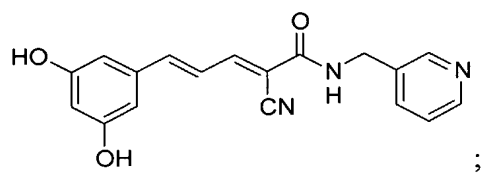




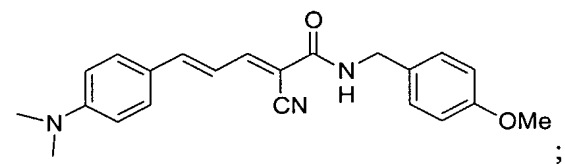
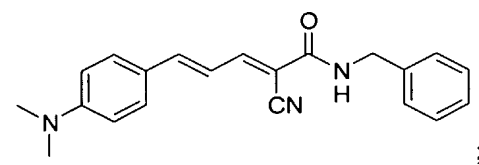
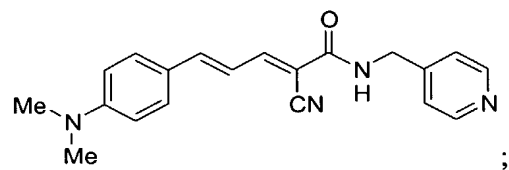
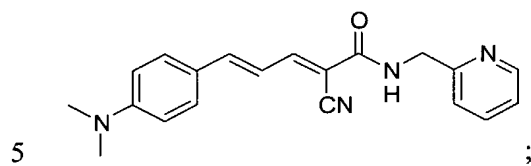
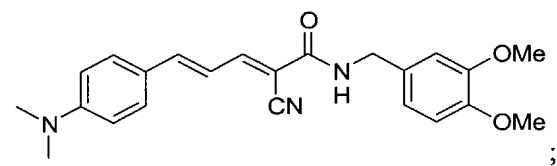
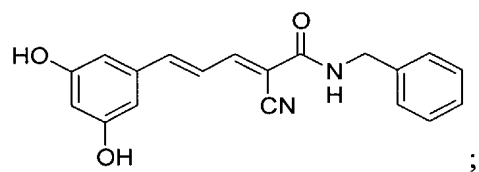
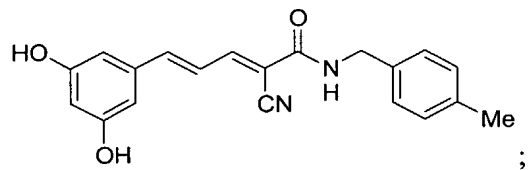
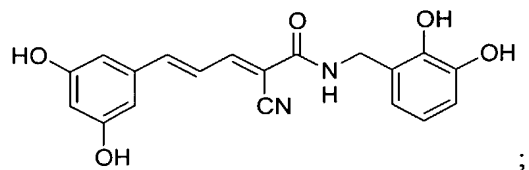
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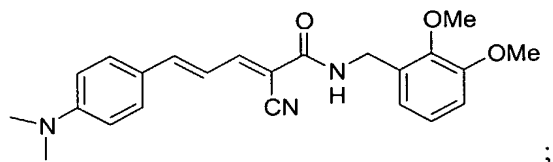




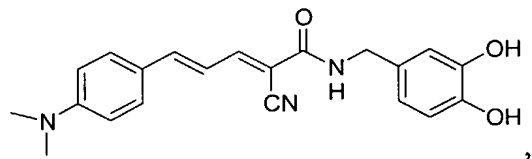




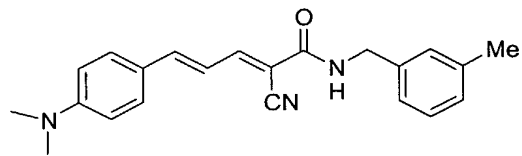




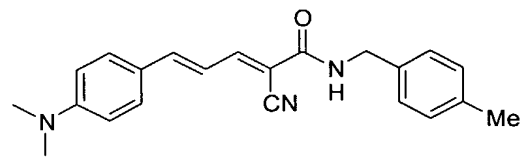
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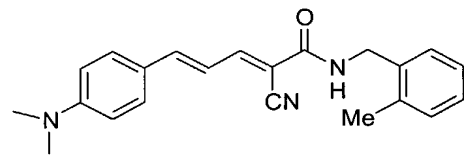
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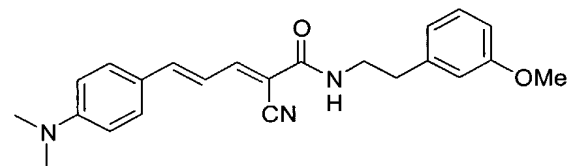


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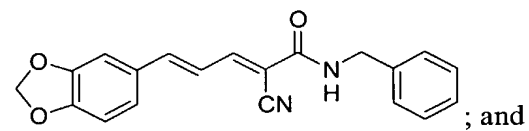


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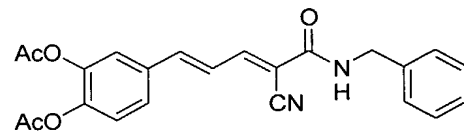
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; and



21. A composition comprising a compound according to any one of  
 10 claims 1 to 20 in admixture with a pharmaceutically acceptable diluent or carrier.

22. A use of a compound capable of modulating cell proliferation according to any one of claims 1 to 20 to prepare a medicament to modulate cell proliferation.
23. A use of a compound capable of inhibiting cell proliferation  
5 according to any one of claims 1 to 20 to inhibit cell proliferation.
24. A use of a compound capable of inhibiting cancer cell proliferation according to any one of claims 1 to 20 to inhibit cancer cell proliferation.
25. A use of a compound according to any one of claims 1 to 20 to treat cancer.
- 10 26. A use according to claim 24 or 25 wherein said cancer is a hematopoietic cell cancer.
27. A use according to claim 24 or 25 wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.
- 15 28. A use according to claim 27 wherein said leukemia is acute lymphoblastic leukemia, Philadelphia+ leukemia, Philadelphia- leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia.
29. A use according to claim 27 wherein said leukemia is acute lymphoblastic leukemia.
- 20 30. A method of modulating cell proliferation comprising administering an effective amount of a compound capable of modulating cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.

31. A method of inhibiting cell proliferation comprising administering an effective amount of a compound capable of inhibiting cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.

5           32. A method of inhibiting cancer cell proliferation comprising administering an effective amount of a compound capable of inhibiting cancer cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.

10           33. A method of treating cancer comprising administering an effective amount of a compound capable of inhibiting cancer cell proliferation according to any one of claims 1 to 20 or a composition according to claim 21 to a cell or animal in need thereof.

34. A method according to claim 32 or 33 wherein said cancer is a hematopoietic cell cancer.

15           35. A method according to claim 32 or 33 wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.

36. A method according to claim 35 wherein said leukemia is acute lymphoblastic leukemia, aggressive Philadelphia+ leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile  
20 myelomonocyte leukemia,

37. A method according to claim 35 wherein said leukemia is acute lymphoblastic leukemia.